

PATENT
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Reply to Office Action of August 19, 2010

IN THE ABSTRACT

Please delete the current Abstract in its entirety and substitute therefor the enclosed
New Abstract.

NEW ABSTRACT

A microscope arrangement and to a method are provided with which the spatial distribution of a magnetically and/or electrically sensitive fluorescent marker in a sample is determined. Fluorescence radiation is excited by primary radiation in the sample and imaged by a microscope. At the same time, within the sample, a spatially inhomogeneous magnetic field is generated, which has a small focal region of minimum field strength. The emission of fluorescence radiation is locally modified in the focal region, which can be observed in the measured intensity distribution. In this way, the distribution of the fluorescence marker even in regions having a size below the optical resolution of the microscope, such as the focal region, can be reconstructed.